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A Plea for Intra-Uterine Medication.

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INTRA-UTERINE MEDICATION.

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Until quite recently the introduction of medicinal substances into the non-puerperal uterine cavity for therapeutic purposes was universally practiced and unreservedly accepted as the proper means of treating certain diseases of the uterus. The various methods, in all their details, by which medicines can be most easily, safely, and efficiently applied to the endometrium, the indications for such treatment, and the dangers occasionally arising therefrom, are abundantly described in all our gynæcological text-books, and are familiar to all physicians interested in our specialty. It is not, therefore, my intention either to dwell on the methods employed or to discuss the efficacy of the various agents recommended by different authors. The object of this brief communication is to call attention to a growing tendency among some of our most prominent gynæcologists to abandon intra-uterine medication, so far as its employment *above* the internal os is concerned, and to condemn it as inefficient, unnecessary, and dangerous. *I wish it distinctly understood that my remarks here do not apply to the treatment of the cervical cavity, diseases of which all*

authorities still agree are practically incurable except by local measures. Among those who have withdrawn their allegiance from intra-uterine medication are two of our countrymen whose names have for a quarter of a century been identified with many details of the treatment which they now substantially abandon. It is true, they object chiefly to the "routine" conventional employment of intra-uterine applications in every case of diseased endometrium; and herein, no doubt, their objection will be sustained. But when one of them (Thomas) says, "I find myself very rarely resorting at present to applications above the os internum uteri,"* and I see it reported that the other (Emmet) no longer makes intra-uterine applications, I can but feel that they are going too far, and that, unless they can offer us therapeutical substitutes for the discarded method which will accomplish, to say the least, more than the topical treatment, we can not afford to give up the latter in many cases where without it we should be powerless.

The most recent expression of Dr. Emmet's views on this subject I find in the proceedings of the last meeting of the British Medical Association at Brighton, as reported in the "Medical Record," September 11, 1886. There he is made to say as follows: "Endometritis and endocervicitis are rare, except in theory; the real trouble consists of a surrounding pelvic peritonitis. Once this latter is checked, and the circulation thus restored, all uterine discharges will cease. As regards the application of iodine to the interior of the womb, he rarely employs that treatment; as a matter of fact, he had reached a point in practice at which he seldom introduced an instrument into the uterus. His uterine sound had been broken for eighteen months, and he had never missed it. All that a sound taught might be

* "Diseases of Women," fifth ed., 1880, p. 298.

made out with the fingers. The uterine mucous membrane would so readily absorb all substances presented to it that it was advisable to do all that was possible by way of the vaginal mucous membrane; moreover, the latter had the advantage of presenting a more extensive surface. By giving up applications to the interior of the uterus, and by largely discarding pessaries, Dr. Emmet had increased his success in treatment," etc.

Two striking facts will be conveyed to the majority of those who have followed Dr. Emmet's teachings for a number of years: 1. That he who ten years or more ago was an ardent advocate of intra-uterine medication, and whose skill in adapting pessaries to the different displacements was proverbial, has seen fit to renounce what appeared to be the settled convictions of a lifetime; and, 2, that to a more or less recognizable inflamed condition of the pelvic cellular tissue or peritonæum are now attributed by him the majority of disorders which we formerly were taught originated in the diseased organs themselves.

I do not think we are all, as yet, prepared to accept this latter view without reservation, however ready we may be to admit that the "routine" use of the uterine sound is reprehensible, and that bimanual palpation suffices, in the majority of cases, to diagnosticate the position of the uterus. As for the absorbent powers of the vaginal mucous membrane, they are known to be greatly inferior to those of the endometrium.

Of course, both Dr. Emmet and Dr. Thomas must have been led to thus radically change their views by what they deemed sufficient practical reasons. Still, I think that most of us will feel that the revulsion has been too great, too sweeping, and that to substantially give up the use of the sound and intra-uterine applications, and to deny the existence of chronic uterine catarrh except as a dependence of

pelvic peritonitis or cellulitis, is scarcely prudent or in accordance with facts.

It seems to me that a mucous membrane remains the same in character wherever it is situated, and that we might as well attempt to cure chronic catarrh or hyperæmia of the mucous lining of the nares, throat, eyes, male urethra, or rectum, by general remedies alone, as to expect such a result in the endometrium. I need but ask what the laryngologists, otologists, and ophthalmologists could do without topical applications to their respective mucous membranes, and how a gleet could be cured without dilatation and cauterization of the urethra; and I fail to see why the same rule does not apply to the mucous membrane lining the uterine cavity.

I hope in this paper to demonstrate that there are certain cases in which intra-uterine medication is not only necessary, but indispensable to a permanent cure, and that it can be rendered as safe as any of the minor local measures. If I repeat to you familiar matters, I beg you will pardon me; I will endeavor to be as brief as possible. But it has seemed to me that the influence of high example might lead us to the opposite extreme, which must result in our discarding a system of treatment which has long stood the test of time, and has more good than bad points.

Now, as regards the first objection to intra-uterine medication—that it is inefficient—let us see at a glance whether it is well founded. The methods which have become popular are: Applications by cotton-wrapped applicators dipped in the fluid to be introduced; gelatin bougies containing the agent; solid sticks of the medicament, left to melt in the uterus, or probes coated with the agent, if it is a salt; ointments squeezed and powders blown into the uterus; finally, injections into the uterus.

Of these methods, the solid caustics and the injections

are probably the most efficient, but also, especially the injections, the most dangerous. The insufflation of powders is not always feasible, as the tube easily becomes clogged, and besides is dangerous, as but few undilated uteri can bear the distension of their cavities by a sudden current of air. Ointments do not seem for catarrhal affections to be so efficient as dry or fluid applications. Thus there remain to us only the two methods first mentioned—the gelatin bougies and the cotton-wrapped applicators. The bougies are open to the same objection as the ointments; they act chiefly by absorption, not as caustics, and are therefore useful mainly in conditions calling for alterative and sorbefacient remedies, as in subinvolution and hyperplasia. Besides, if they are not particularly well prepared and become hard before use, they do not dissolve *in utero*, and produce severe uterine colic, or worse. Recently, I should say, I have procured most excellent gelatin bougies, containing five grains each of alum and iodoform, which remain soft and soluble for an indefinite period, from Mr. Robert E. Fleischer, apothecary, of Avenue C and Sixth Street, who makes a specialty of these gelatin preparations. With these I have had very good results in chronic endometritis, especially when attended with hæmorrhagic oozing.

There remain to us, thus, only the cotton-wrapped applicators dipped in fluid, which may be said to be fairly safe, unless the fluid used is a powerful escharotic, such as nitric or chromic acid, or strong chloride-of-zinc solution. But these moist applications are, again, open to the objection that a large part of the fluid is rubbed off, and the surface of the moist cotton becomes coated with an albuminate before reaching the cavity of the uterus beyond the internal os; and undoubtedly this objection is valid. It would thus seem that all methods of application which are safe

are inefficient, and those which will actually cure are dangerous. But this is only apparently the case, as I will presently show.

As regards the second objection to intra-uterine medication—its danger—there are too many instances of death after intra-uterine injections, too many cases of peritonitis and cellulitis after the introduction of solid caustics, not to omit a few similar cases after the use of applicators, to deny this assertion. Hence I, for my part, have long since entirely discarded injections into the non-puerperal, or certainly undilated, uterine cavity. After the use of cotton-wrapped applicators, I can remember but one instance of inflammatory reaction, and that was after the use of the sharp curette and nitric acid.

In the hands of some gynæcologists intra-uterine injections, however, seem devoid of danger. Thus, at the meeting of the American Gynæcological Society, held in Baltimore in 1879, Dr. William Goodell stated that he had seen no bad results from injecting four to eight drops of pure carbolic acid or iodized phenol, with a small amount of hydrate of chloral, into the uterus, and had found this treatment much more efficient than the usual applications, merely using the precaution to have the canal patulous. During the past summer I saw Martin in Berlin repeatedly scrape out the uterine cavity with Récamier's curette, and immediately inject a whole Braun's syringeful of pure liquor ferri subsulph., followed by copious irrigation with tepid water. The patients were under an anæsthetic. This practice was evidently a matter of routine, and no evil consequences were expected, or indeed ensued. In no case was it thought necessary to dilate the canal beyond the width found when the patient came under treatment. The injections were made in the dorsal position, the cervix being exposed by Simon's specula, which position I consider safer than the

semiprone posture, as less likely to favor entrance of fluid into the Fallopian tubes.

To make the introduction of fluids into the uterus more efficient, without at the same time increasing the danger, I have for a number of years employed two methods, neither of which is original with me:

1. The applicator syringe, the fine nozzle of which is wrapped with cotton which is saturated with the medicinal fluid contained in the barrel after the nozzle has been passed into the uterine cavity. If the piston is pushed forward slowly, the cotton becomes gradually saturated and no free fluid escapes into the cavity, while as thorough an effect is achieved as if the fluid had been injected. I have done this many times, but must confess that I have seen several instances of shock and uterine colic after it, even requiring a hypodermic of morphine, the fluid used being, in one instance, nitric acid; in one, solution of nitrate of silver, ʒ j to ℥ j; in one, impure carbolic acid; in two, pure tincture of iodine; and in one, sol. ferri persulph. and glycerin, equal parts. In all these cases the ordinary cotton-wrapped applicators had previously been used without reaction. In consequence of these six warnings, I have now reduced the use of the applicator syringe to cases where acquaintance with the tolerance of the uterus renders such treatment reasonably safe, and where the uterine canal is widely patulous. In the latter condition I decidedly prefer, when I wish a very positive effect, the other method, namely—

2. To slip the thoroughly soaked cotton from the applicator and leave it in the uterine cavity for twenty-four or forty-eight hours. The cotton in this way acts as a very efficient tampon and hæmostatic if required, and the medicinal application is most decided and prolonged. From this method I have seen but good, and no bad, results.

Both the uterine and vaginal tampons can be removed by the patient herself, on the next day, by means of strings attached to each. In no case has uterine colic followed this treatment.

In a recent quite original work, entitled "Practical Elements of Gynæcology," by Dr. A. Rheinstaedter, of Cologne (Hirschwald, Berlin, 1886), the author, who is not a professor, but merely a general practitioner who during a twenty-five years' practice has gradually become a specialist, states that, by the weekly application on a cotton-wrapped aluminium applicator of a fifty-per-cent. solution of chloride of zinc, he has never failed to cure within from two to three months every case of uterine catarrh depending on chronic endometritis, without the use of any other treatment, and that never has contraction of the canal ensued. The applications are always made at the patient's residence, and she is kept in bed until the next day, and, of course, all ordinary reasonable precautions are observed. Only once, in a dispensary patient, who took a two-hours' walk home after the treatment, has he witnessed a slight attack of cellulitis.

I do not desire to weary you with an enumeration of the views and peculiar methods of different authors. I merely wish to emphasize the fact that there are various precautions which render the intra-uterine application of certain agents reasonably safe, while not destroying their efficiency. Thus, applications of iodine, carbolic acid, nitric acid, or solution of chloride of zinc, may be made without special risk if the uterine canal is well dilated, and, in the case of the stronger agents, the patient is kept in bed for one or two days. If these conditions are observed, the cotton-wrapped applicator or straight stick, the applicator syringe, or the medicated uterine tampon, may be used with equal impunity. Only I would except the use of nitric acid

or chloride of zinc by the latter method, for fear of producing too deep an effect.

While thus admitting the inefficiency of some of the methods of intra-uterine medication and the danger of others, let us see whether the opponents of this treatment have compensatory substitutes to offer. Starting from the idea that a uterine catarrh or hæmorrhage is but symptomatic, and depends on some pathological condition of the general system or of the pelvic organs not inherent to the mucous membrane of the uterus itself, they very properly advise the cure of that condition—the cause of the intra-uterine disease. Such conditions are: a vitiated state of the general health, displacement, subinvolution, or hyperplasia of the uterus, laceration of the cervix, fungous degeneration of the uterine mucous membrane, general pelvic hyperæmia, etc. Undoubtedly, the proper plan of treatment in such cases is to remove the cause of the endometritis, build up the general health, overcome constipation by exercise, diet, and proper laxatives, rectify the displacement, stimulate the uterus to involution and absorption of its adventitious elements, sew up the laceration, scrape off the vegetations, etc. But, granted that all this has been done and the catarrh is cured in the cases in which it is really caused by the conditions mentioned, I maintain that there still remain numerous cases of chronic endometritis—due to cold, to exposure during menstruation, to sexual abuse, to venereal infection, to subinvolution chiefly after abortion, to the extension upward of a cervical catarrh, etc.—in which the removal of the original exciting cause fails to cure the disease; and, further, I fail to see how we can benefit or cure the numerous cases of chronic subinvolution and hyperplasia which resist every general and local remedy, unless we resort to methodical and prolonged intra-uterine medication.

Dr. Thomas says (*op. cit.*, p. 307) that, if the removal of

the causes mentioned fails to effect improvement, the application of the dull-wire curette over the whole surface will produce "an altered state in the entire endometrial membrane, break distended blood-vessels, and often accomplish a great deal for the relief of the disease."

Fritsch * does not approve of this treatment, for he says most pointedly: "In cases of simple supersecretion the therapeutic measures mentioned" (applications of tincture of iodine after removing the mucus) "achieve much better results than the recently recommended heroic plan of deep cauterization and curetting of the uterus. The uterus should not be considered a fistulous track, slow to heal, and covered with fine granulations. A partial destruction of the diseased mucosa merely has the therapeutic value of a local depletion of blood. If the action of the mucous membrane is to be altered, or its secretion modified, it is useless to scrape away particles of it. It is much more important to remove the secretion, and then to paint the whole endometrium with an alterative agent." I do not agree with Fritsch in these remarks, for I firmly believe that the curette often does what Dr. Thomas alleges for it, and I have many times employed it for this purpose when I failed to find vegetations. But, if the repeated application of the curette does not cure the endometritis, what then? Or if, after removal of vegetations, the menorrhagia still continues, or if there were no vegetations to account for the profuse menstruation which still persists? That such cases are not uncommon will be admitted. And my object is precisely to insist upon the necessity of continuing intra-uterine medication, with proper precautions, in the cases where the very proper and rational removal of the presumable causes of the uterine disease has failed to achieve a cure. From my experience I should

* "Diseases of Women," 1884, p. 200.

recommend intra-uterine medication in the following conditions:

1. *Chronic Endometritis in Nullipara.*—I have grown to believe this so much of a local disease that I do not believe it curable by other than topical applications. Of course, I except the existence of one of the causes already mentioned. The most intractable cases have been those of virgins, and young, obese women, in whom I have found the severe applications—such as solution of chloride of zinc, ℥ j to ℥ ij to ℥ j; or of nitrate of silver, same strength—the most efficient. Nitric acid I have never employed above the os internum in a nullipara, and chromic acid I believe equally unsafe, although I think the latter remedy most excellent in chronic cervical catarrh. I recollect one case of a young married lady, sterile after four years of married life, in whom I could find no cause for the sterility but a chronic endometritis; after three applications of impure carbolic acid by the cotton-wrapped probe, I went into the country on my vacation. On my return, two months later, she told me that she had missed a period, and pregnancy was soon ascertained to have taken place, which went to a normal conclusion. I think the cleansing of the uterine canal of mucus and pus had more to do with the conception in this case than the mild cauterization.

2. *Villous Endometritis, to effect a Permanent Cure after Removal of the Vegetations by the Curette.*—After scraping out the uterus for menorrhagia caused by villous degeneration, I invariably plug the uterus at once with cotton soaked in pure tincture of iodine or in iodized phenol, and continue the applications of tincture of iodine, generally with the applicator, twice weekly for several months, then once a week, once in two weeks, and, finally, only once a month a few days before a period, until the menstrual flow is and remains perfectly normal in amount. I know that I

have thus secured a permanent cure, which I feel sure I should have failed to do in many of the cases if I had omitted this after-treatment. I have thus cured patients who had been curetted by other gynæcologists at home and abroad, without any or sufficient after-treatment, and had consequently continued to flow until systematic prolonged intra-uterine medication was resorted to.

3. *Chronic Subinvolution and Hyperplasia of the Uterus.* —I know that the prolonged use of ergot and hot douches will often result in restoring a subinvoluted uterus in the earlier stages of the disease to its normal condition, especially if the faradaic or the interrupted galvanic current is also used. But I have never been able to convince myself that a uterus in a state of chronic subinvolution or of actual hyperplasia was much benefited by any measures, local or general, not applied directly to its interior. I certainly have seen more benefit follow frequent and prolonged intra-uterine applications of tincture of iodine and iodized phenol than any other measure. And in these cases the use of the ordinary cotton-wrapped applicator has answered as well as other methods, the mere irritation of the passage of the applicator seeming to play some part in stimulating the organ.

4. *Metrorrhagia from a Flabby or Subinvoluted Uterus.* —In many such cases, after the usual local and general hæmostatics failed, I have succeeded in checking the hæmorrhage, when its persistence had become alarming, by plugging the uterine cavity with cotton saturated with compound tincture of iodine or with sol. ferri persulph. and glycerin, equal parts. In one case of hæmorrhage after suspected early miscarriage, where the patient could scarcely have borne a repetition of the flow, I was obliged thus to plug the uterus daily for over a week before it contracted permanently.

I am aware that this example does not exactly belong under the head of "routine" applications, but I think it worth while to refer to it.

In conclusion, I must again offer as an excuse for this communication, which may appear entirely uncalled for to those practitioners who believe in and habitually use intra-uterine medication, my apprehension lest by the force of distinguished teaching we go from one extreme to the other, and, from undoubtedly exaggerating the value of intra-uterine medication, abandon it entirely. I am sure it has its decided value, and, *in well selected cases* and with reasonable precautions, will prove both efficient and safe. I trust that this paper may elicit the views of the members of the profession, both as to the value of the treatment in general and as to the respective worth and safety of the various agents, in order that we may see whether any decided changes of opinion have recently taken place. My own purpose has been merely to lead up to the subject, not in any way to exhaust either its past or present history or its future possibilities.